

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) An isolated complex comprising one or both of complement activation product C5, and membrane attack complex (C5b-9) associated with circulating immune complex.
2. (Currently amended) A method for inhibiting the ~~formation of a~~ non-covalent ~~combination~~ association of membrane attack complex and circulating immune complex, the method comprising application administration of an inhibitor selected from the group consisting of a monoclonal antibody, ~~peptide mimotope, or small molecule into~~ patients suffering from at least one complement ~~[[and]]~~ or circulating immune complex mediated disease~~[[s]]~~.
3. (Previously presented) A method for screening candidate compositions or processes for an ability for inhibiting the formation of membrane attack complex on circulating immune complex comprising assessing the composition or process for the reduction in membrane attack complex associated with circulating immune complex as a result of the application of the candidate composition or process.
4. (Previously presented) A method of monitoring the formation of membrane attack complex and other split products of C5 on circulating immune complex from the serum, plasma, cerebrospinal fluid and other bodily fluids in diseases associated with complement and circulating immune complex pathogenesis comprising measuring the formation of said products and assessing for symptoms of said disease.
5. (Previously presented) Isolated complexes comprising one or more of the group consisting of non-covalent linked complement split products C1q, C3, C4, C5 and membrane attack complex on circulating immune complex.

6. (Currently amended) A method of inhibiting the non-covalent association of at least one of C1q, C3, C4, C5 and membrane attack complex to circulating immune complex, the method comprising

application administration of an inhibitor selected from the group consisting of a monoclonal antibody, ~~peptide mimotope, or small molecule into~~ patients suffering from at least one complement- ~~[[and]]or~~ circulating immune complex-mediated disease[[s]].

7-8. (Cancelled)

9. (Previously presented) A process for quantitative measurement for the presence of complement C5 and C5b-9 associated with circulating immune complex, the process comprising the following steps:

- a. Providing a test device comprising a receptor preparation in solid phase as a capture reagent for circulating immune complex;
- b. Establishing a selected working range for an immunoassay within said ranges of composition of circulating immune complex, IgG-CIC 2 to 1000 µg/ml, IgA-CIC 0 to 1000 µg/ml, IgM-CIC 0 to µg/ml, C1q bound to CIC 0 to 10 µg/ml, C3 bound to CIC 0 to 30 µg/ml, C4 bound to CIC 0 to 10 µg/ml, C5 bound to CIC 0 to 10 µg/ml and C5b-9 0 to 10 µg/ml;
- c. Constructing a standard assay curve by plotting relative degree of immunochemical binding of said circulating immune complex components to the test device;
- d. Interacting a fixed concentration of immunospecific conjugate of said substances, the composition of complexes resulting from said immunological substances and immunospecific conjugate being within the selected working range limits;
- e. Providing a test system comprising of said test device, said immunospecific conjugate, said immunological substances, the amount of said immunospecific conjugate being substantially equivalent to said fixed concentration of immunospecific conjugate, and the amount of said immunospecifically determinable substance being appropriate to produce a known degree of immunochemical binding corresponding to a pre determined point on said standard curve, thereby enabling

quantitative assaying of one or more of complement proteins C1q, C3, C4, C5 and C5b-9 present on circulating immune complex.

10. (Cancelled)

11. (Previously presented) A process for measurement of one or more complement proteins C1q, C3, C4, C5 and C5b-9 from plasma or other bodily fluids of animals suffering from or at risk of suffering from a disease or condition, including but not limited to autoimmune, cardiovascular, neurodegenerative disorders, oncological diseases and infectious disease, said process comprising:

- a. Providing a test device comprising a receptor preparation in solid phase ;
- b. Establishing selected working ranges for said immunoassay within said ranges for complement proteins;
- c. Constructing a standard assay curve by plotting relative degree of immunochemical binding of said complement component(s) to the test device;
- d. Interacting a fixed concentration of an immunospecific conjugate directed to complement proteins and immunospecific conjugate being within pre selected working range limits;
- e. Providing a test system comprising of said test device, said immunospecific conjugate, said immunological substances, the amount of said immunospecific conjugate being substantially equivalent to said fixed concentration of immunospecific conjugate, and the amount of said immunospecifically determinable substance being appropriate to produce a known degree of immunochemical binding corresponding to a pre determined point on said standard curve, thereby enabling quantitative assaying of one or more of complement C1q, C3, C4, C5 and C5b-9 present on circulating immune complex.

12. (Previously presented) A process for quantitation of immunoglobulin isotype composition of circulating immune complex or antigens bound within circulating immune complex comprising using an ELISA based on receptor based capture mechanism, said process comprising:

- a. Placing the receptor on solid phase of ELISA plates, micro beads or other suitable surface;

- b. Attaching the biotin or other form of detection tag on the antigen or antibody;
- c. Mixing the tagged antigen or antibody with the patient plasma, patient serum, sinovial fluid, cerebrospinal fluid (CSF) or other bodily fluid;
- d. Placing the mixture in contact with receptor attached to the solid surface;.
- e. Washing the unbound components with buffers;
- f. Quantitating the tagged antigen or antibody with a reagent including, but not limited to Avidin-Horse Radish Peroxidase and color development reagents.

13. (Previously presented) A process as set forth in claim 3 for screening the composition of a blocking agent for the formation of membrane attack complex and deposition of C5 on circulating immune complex.

14. (Cancelled)

15. (Currently amended) A process for screening a composition that targets blocking of complement activation or other component assembly in the circulating immune complex as set forth in claim[[s]] 11, and modulating the binding of serum acute phase proteins bound to-circulating immune complex, said process comprising:

- a. Attaching the receptor to solid phase or studying the interaction in the liquid phase, allowing the interaction of the circulating immune complex with the receptor in presence of complement proteins to activate complement deposition or other acute phase proteins on-circulating immune complex;
- b. Placing the blocking composition during the activation of the complement on circulating immune complex or association of serum acute phase protein;
- c. The composition being selected from the group consisting of a chemical, biochemical, protein, peptide and monoclonal ;
- d. Obtaining initial data indicating whether the formation of membrane attack complex and binding of complement C1q, C2, C3, C4, and C5 is inhibited on the circulating immune complex;
- e. Obtaining data indicating whether the serum acute phase proteins associated with the circulating immune complex is inhibited.

16-17. (Cancelled)

18. (Currently amended) A method of reducing disease symptoms in an individual **in need thereof, the method** comprising:

identifying an individual in need of reducing the symptoms ~~due to~~ **caused by** increased complement fixation on circulating immune complex;

wherein the symptoms of increased complement fixation on circulating immune complex are selected from the group consisting of leading to inflammation and tissue necrosis;

wherein the reducing disease symptoms is accomplished by administering a composition comprising a monoclonal antibody, ~~peptide, mimotope or active molecule~~

wherein the monoclonal antibody inhibits complement fixation on circulating immune complex.

19. (Previously presented) A process in accordance with claim 11 that further comprises contacting a receptor during interaction with circulating immune complex and complement with at least one of a humanized monoclonal antibodies, active molecules, peptides and mimotopes and obtaining data indicative of whether the activation of complement has been inhibited.

20. (Currently amended) A ~~process~~ **method** in accordance with claim ~~[[17]]~~ **18**,

wherein the administering that further comprises inoculating **the individual patients or animals** with the immune complex and composition,

wherein the ~~symptoms immune complex mediated immune responses~~ are **reduced** ~~altered providing beneficial effect~~.

21. (Previously presented) The method of claim 2 wherein the disease is selected from the group consisting of systemic lupus erythematosus, rheumatoid arthritis, cardiovascular diseases, kidney diseases, and autoimmune diseases.

22. (Previously presented) The method of claim 4 wherein the disease is selected from the group consisting of autoimmune diseases, cardiovascular diseases, neurodegenerative diseases, infectious disease and oncological diseases.

23. (Previously presented) The method of claim 6 wherein the disease is selected from the group consisting of systemic lupus erythematosus, rheumatoid arthritis, cardiovascular diseases, kidney diseases, and autoimmune diseases.